

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

A¹ Claim 1 (Currently amended): A method for presenting grain for NIR spectography examination, comprising, placing a quantity of grain to be examined in an overhead compartment with a lower grain discharge port, causing the grain to move downward through the discharge port in a curtain of grain of measured thickness, depositing the curtain of grain for downward movement across a fixed sloping presentation surface, associating the optics of an NIR spectography apparatus with the presentation surface to permit light from the optics to be projected into the curtain of grain at a substantial right angle with respect to the direction of flow of the curtain of grain over the presentation surface, and gathering data from energy reflected towards the NIR spectography apparatus for analysis of microconstituents within the grain comprising the curtain of grain.

Claim 2 (Original): The method of claim 1 wherein the area surrounding the optics of the NIR spectography apparatus and the portion of the curtain of grain moving over the presentation surface adjacent such apparatus are sealed from ambient light.

Claim 3 (Original): The method of claim 1 wherein a movable baffle is associated with the discharge port for adjustably

regulating the thickness of the curtain of grain flowing from the discharge port.

Claim 4 (Original): The method of claim 1 wherein a plurality of separate quantities of grain are sequentially, separately, and continuously moved into the overhead compartment to permit each quantity of grain to be separately analyzed for its microconstituents.

Claim 5 (Original): The method of claim 1 wherein the aforesaid steps are conducted on a moving grain harvesting combine while the grain in a field is being harvested.

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Claim 6 (Original): The method of claim 1 wherein a controller is associated with the discharge port, and the NIR spectography apparatus to control the thickness of the curtain of grain and its analysis.

Claim 7 (Currently amended): An apparatus for presenting grain for NIR spectography examination, comprising, an overhead grain compartment having a lower grain discharge port,

a closeable valve on the discharge port,
a downwardly extending grain channel located below the discharge port and adapted to receive grain from the overhead compartment when the valve is open,
the channel including a fixed sloping presentation surface,
an adjustable baffle in the channel adapted to direct a curtain of grain of uniform thickness from the overhead compartment into engagement with the sloping presentation surface,

the channel having a discharge opening at a lower end,
and an NIR spectography apparatus associated with the
presentation surface and including an optic system to
direct light at a substantial right angle with respect
to the direction of flow of the curtain of grain over
the presentation surface for analysis of the
microconstituents within the grain comprising the
curtain of grain.

Claim 8 (Original): The apparatus of claim 7 wherein the
channel has a wall in spaced relation to the presentation
surface which is disposed at an angle with respect to the
presentation surface.

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Claim 9 (Original): The apparatus of claim 7 wherein means
are provided for surrounding the optics of the NIR
spectography apparatus and a portion of a curtain of grain
moving over the presentation surface are sealed from exposure
to ambient light.

Claim 10 (Original): The apparatus of claim 7 wherein a
controller is associated with the valve and the baffle so
that the baffle can be selectively adjusted to adjust the
thickness of the grain curtain, and the valve can be
selectively operated to permit separate quantities of grain
from passing from the compartment into the channel.

Claim 11 (Original): The apparatus of claim 1 wherein the
aforesaid components are mounted on a grain harvesting
combine to be operated while the combine is harvesting grain.

A' Claim 12 (Currently amended): An apparatus for presenting grain for NIR spectography examination, comprising, an overhead grain compartment having a lower grain discharge port,
a closeable valve on the discharge port,
a downwardly extending grain channel located below the discharge port and adapted to receive grain from the overhead compartment when the valve is open,
the channel including a sloping presentation surface,
~~The apparatus of claim 7 wherein the sloping surface is~~
comprised of a transparent material,
an adjustable baffle in the channel adapted to direct a curtain of grain of uniform thickness from the overhead compartment into engagement with the sloping presentation surface,
the channel having a discharge opening at a lower end,
and an NIR spectography apparatus associated with the presentation surface and including an optic system to direct light at a substantial right angle with respect to the direction of flow of the curtain of grain over the presentation surface for analysis of the microconstituents within the grain comprising the curtain of grain.

Claim 13 (Original): The apparatus of claim 7 wherein the optics of the NIR spectography system are immediately adjacent an exterior surface of the sloping surface.

Claim 14 (Currently amended): An apparatus for presenting grain for NIR spectography examination, comprising,

an overhead grain compartment having a lower grain discharge
port,
a closeable valve on the discharge port,
a downwardly extending grain channel located below the
discharge port and adapted to receive grain from the
overhead compartment when the valve is open,
the channel including a sloping presentation surface,
an adjustable baffle in the channel adapted to direct a
curtain of grain of uniform thickness from the overhead
compartment into engagement with the sloping
presentation surface,
the channel having a discharge opening at a lower end,
an NIR spectography apparatus associated with the
presentation surface and including an optic system to
direct light at a substantial right angle with respect
to the direction of flow of the curtain of grain over
the presentation surface for analysis of the
microconstituents within the grain comprising the
curtain of grain, and

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~~The apparatus of claim 7 wherein the optics of the NIR~~
spectography system is located within the sloping
surface and is in communication with the channel so as
to be in direct contact with a curtain of grain moving
over the sloping surface.

Claim 15 (New): The apparatus of claim 7 wherein the sloping
surface is comprised of a transparent material.

Claim 16 (New): The apparatus of claim 7 wherein the optics
of the NIR spectography system is located within the sloping
surface and is in communication with the channel so as to be

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in direct contact with a curtain of grain moving over the
sloping surface.

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